

THE RHODE ISLAND MEDICAL JOURNAL



Owned and Published by the Rhode Island Medical Society. Issued Monthly

VOLUME XIV
No. 3

Whole No. 258

PROVIDENCE, R. I., MARCH, 1931

PER YEAR \$2.00
SINGLE COPY 25 CENTS


CONTENTS

ORIGINAL ARTICLES


- Perimetry and its Application to Some Intracranial Lesions. By Raymond F. Hacking 35
- The Diagnostic Value of Bile Drainage. By Russell S. Bray, M.D. 38

Contents continued on page IV advertising section.

ENTERED AS SECOND-CLASS MATTER AT THE POST OFFICE AT PROVIDENCE, R. I., UNDER ACT OF MARCH 3, 1879



TRAVEL SERVICE



WEST INDIES—Visiting Cuba, Jamaica and Bermuda Porto Rico, Panama Canal, etc. Sailing from Boston and New York weekly. Special sailings Mar. and Apr., \$111 and up.

BERMUDA—Wednesdays and Saturdays—8, 9 and 12 day tours, including hotels and all expenses.

HAVANA—Every Saturday—Ten days—all expenses, including hotels and sightseeing, \$140.

CALIFORNIA—Through the Panama Canal as low as \$125. Excursion tickets by rail, daily; choice of routes; stopovers.

EUROPE—Steamship bookings by all lines. Tours independent and under escort.

SHORT SEA TRIPS—Savannah Jacksonville, Miami and New Orleans.

Our Complete Travel Service
Everything in One Office
No Service Charge

Send for "TRAVEL," Book

SPRING CRUISES SUMMER

Steamship Reservations ALL Independent Arrangements ALL Tours of Leading Tourist Co.'s ALL Cruises Anywhere

AYLSWORTH

TICKETS ... TOURS ... CRUISES

36 WEYBOSSET ST. PROVIDENCE DEXTER 1300

CAPROKOL



Promptly relieves
Pain - Burning - Frequency
in acute urinary infection

Caprokol (Hexylresorcinol, S & D) exerts a marked analgesic action on the urinary mucosa, affording almost immediate ease and comfort to the patient.

The active bactericidal effect of Caprokol in the urine may be relied upon to check existing infection and to prevent its introduction when frequent or prolonged catheterization becomes necessary.

Capsules for adults
Solution for children

SHARP & DOHME
 Baltimore — Philadelphia

Mention our Journal—it identifies you.

THE RHODE ISLAND MEDICAL JOURNAL

The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee

VOLUME XIV { Whole No 258
NUMBER 3

PROVIDENCE, R. I., MARCH, 1931

PER YEAR \$2.00
SINGLE COPY 25 CENTS

ORIGINAL ARTICLES

PERIMETRY AND ITS APPLICATION TO SOME INTRACRANIAL LESIONS*

By RAYMOND F. HACKING

105 WATERMAN STREET, PROVIDENCE, R. I.

The term "visual fields" is applied to that area in which objects may be seen while the eyes are at rest. Perimetry is the measurement and study of this area. The normal size and shape of the visual fields is dependent upon several conditions; the eyes may be prominent or deeply set, the nose may be large or small, the brow overhanging or not. In making the examination it is influenced by the amount of light, the refractive state of the patient's eyes, the size of the test object, the distance at which the examination is made and many other factors. All of these variables must be considered when charting the visual fields since they affect their interpretation. The taking of visual fields is a time-consuming and arduous task even under ideal conditions but the difficulties are increased in cases where there is a lack of co-operation on the part of the patient.

The ophthalmoscope gives the observer a direct means of examining and studying changes which take place within the eye. These changes in order to be apparent, however, must be rather marked. Perimetry, on the other hand, gives us the means of detecting and studying lesions of the visual tract before they become visible with the ophthalmoscope. Hence perimetry in ophthalmology is analogous to the microscope in the laboratory.

The laws of projection and direction establish the fact that every point in space within the visual field has a corresponding retinal point; also, every point in one retina has a corresponding and definitely related point in the other retina.¹ Light rays from objects must pass through the pupil. Rays coming from the left side pass to the right half of the retina, and rays coming from the right side pass

to the left half of the retina, when they come from below they pass to the superior half; from above, to the inferior half. Visual impressions in the retina go the whole length of the brain to the occipital lobe behind. It is upon this fact that the value of perimetry is dependent. A brief review of the anatomy of the visual tracts will serve to make this clear.

From the retinal cells fibers arise which pass backwards along the optic nerves to the optic chiasm. Here the optic tracts begin. The fibers from the temporal half of the retina continue into the optic tract on their own side, while those from the nasal half of the retina cross over to the opposite side, and, with the temporal fibres of that retina form the opposite optic tract. The optic tract is therefore made up of direct fibres from the temporal halves of the retinae on the same side and the decussating fibres from the nasal halves of the opposite retinae. The arrangement of the fibres of the optic tracts is interesting. The upper fibres are from the upper portions of the retinae, those below from the lower portions of the retinae on the right or left sides as the case may be. This arrangement is maintained throughout their course. The fibres from the macula regions are located in the posterior portion of the optic chiasm.² The fibres of the optic tract starting at the chiasm, terminate at the primary basal centers. These centers are, the pulvinar of the thalamus, the corpora quadrigemina, and the external geniculate body. All of the visual fibres, according to Henschen,³ enter and end in the external geniculate body. The optic radiations start from the external geniculate body and go to the occipital lobe. In this passage they pass forwards into the temporal lobe and then outwards and backwards looping around the descending horn of the lateral ventricle and then backwards as an inferior longitudinal fasciculus to reach their destination in the cortex of the occipital lobe above and below the calcarine fissure.⁴ Here, as in other portions of the visual tract, the fibers from the retina retain their anatomical positions; those from the upper portions of each half being above the fissure, those from the lower portions being below the fissure. All of the fibers from the right halves of each

*Read before the Providence Medical Association, Nov. 3, 1930.

retina are located in the right occipital lobe; those from the left halves, in the left occipital lobe.

Before entering into a discussion of pathological visual fields a brief consideration should be given to the various types encountered and the terminology used in describing them. When one half of the visual field is blind it is called an hemianopsia, if it is on the same side in each eye it is an homonymous hemianopsia; if on the nasal side in each eye, a bi-nasal hemianopsia; if on the temporal side in each eye, a bi-temporal hemianopsia. If the fields are contracted above it is a superior altitudinal hemianopsia, below, an inferior altitudinal hemianopsia. Field defects involving only a quadrant are called quadrant anopsias. Small sector defects less than a quadrant are called anopsias.

Probably the largest number of cases that we see are due to involvement of the optic tracts in the region of the optic chiasm and by far the largest portion of chiasmal lesions are due to pituitary disturbances owing to the close proximity of the pituitary body to the optic pathways. Ocular lesions constitute some of the most important complications and almost all of the complications are dependent upon the direct pressure of the enlarged gland. The most typical field defect is a bi-temporal hemianopsia due to pressure upon the mesial sides of the optic tracts. An homonymous hemianopsia may also occur. According to Uthoff⁵ it is ten times as uncommon while Cushing and Walker consider it only twice as infrequent. This latter type of field defect is due to the enlargement being greater on one side and pressure effects are only produced on that side.

It is rare to find the field defect advancing equally in the two eyes and consequently it is unusual to find bilaterally symmetrical defects; and furthermore, subsequent examinations may show recessions and advances from time to time although the general tendency is toward blindness.

In the majority of cases of pituitary disease interfering with the optic tracts whether the process is intra-sella or supra-sella the first perimetric indication is a slant in the boundary of the upper form field and a quadrantic defect in the color field. The defect commences in the upper temporal quadrant and progresses more rapidly in the central part than towards the periphery so that a gourd-shaped figure is produced. As the process advances a sharp cut hemianopsia is found, blind

to color and form; the nasal field of each eye remaining. The nasal fields later begin to shrink concentrically so that ultimately only a small functioning patch of vision remains in the lower nasal quadrant and finally this disappears.⁶

When relief of pressure has been effected by operative measures or has resulted spontaneously the recession of the field defects takes place in a sequence the converse of that characterizing the stage of advance. The restoration of the visual field peripheries is possible even when the process has advanced beyond the stage of half vision and some sight may be regained even after total loss of vision has occurred provided that it has not been of too long duration.

For the recognition of supra-sella tumors, Cushing⁷ has given us the following syndrome: First, a primary optic atrophy which ordinarily is of very slight degree; second, a bi-temporal hemianopsia or a tendency in that direction; and third, an apparently normal sella.

To sum up, lesions of the optic chiasm show a bi-temporal hemianopsia and are characterized by a very early loss of visual acuity due to the macula fibers, which supply our central or acute vision, being encroached upon as they cross in the posterior portion of the chiasmal angle and the evolution of half field defects is gradual. This is in contrast to the hemianopsias due to tract or hemisphere involvement which are marked by a more sudden onset with little or no loss of visual acuity.

Although pituitary disease is responsible for the majority of chiasmal lesions other conditions also play a part. An aneurysm of the internal carotid artery may give rise to an homonymous hemianopsia, sclerosis of the internal carotid will produce a nasal hemianopsia on the same side. If both internal carotids are sclerosed the very rare type of bi-nasal hemianopsia will result. Tabes dorsalis may have its starting point in the chiasm producing field defects of the hemianopic type. The same is true of multiple sclerosis.

Tumors in the tempora-frontal region which progress to the point of blocking the third ventricle give rise to an homonymous hemianopsia frequently of the altitudinal type. This is due to pressure upon the chiasm from above as the result of dilatation of the ventricle.

To the optic radiations themselves we owe a syndrome as beautiful as any in cerebral pathology and in the hands of Cushing⁸, it has supplied the

key to what was once one of the most obscure regions of the brain. These radiations as mentioned before traverse a considerable portion of the temporal lobe before sweeping backwards to the occipital cortex. A tumor then in the lower part of the right temporal lobe will involve those fibers which carry impulses from the lower right quadrant of the retina and will result in a left upper quadrant homonymous hemianopsia. The discovery of these quadrantic lesions has revolutionized localization in the temporal lobes. The complete homonymous hemianopsia of temporal lobe lesions is a late manifestation and is preceded by quadrantic defects. It is typical of quadrantic hemianopsias that the visual field defect is incomplete and it is owing to this fact that they have so long escaped attention. They can only be discovered by accurate and painstaking perimetry. The temporal lobe yields other symptoms as bizarre as any in cerebral pathology, namely, visual hallucinations and hallucinations of taste and smell known as uncinate attacks. Those of vision are very curious and interesting occurring as a row of black figures or black cats, the same on every occasion and appearing in the blind portions of the visual fields. The combination of quadrantic hemianopsia with uncinate attacks thus forms a very complete syndrome, distinguishing sharply when it occurs, temporal lobe tumors. The quadrantic visual field defects are by far the most important sign in this condition.

Perimetry may help in locating brain abscesses complicating otitis media and mastoiditis and thus a temporo-sphenoidal abscess may be localized. Coleman⁹ reported a series of twenty-eight cases of brain abscesses in which visual fields were helpful in localizing, in nine of them, the lesion as a temporo-sphenoidal lobe abscess.

Hemorrhages or infarctions involving the temporal lobe, internal capsule or external geniculate body may show a very rapid sharp cut homonymous hemianopsia. These lesions, after repeated visual fields, can be diagnosed since most vascular insults are transitory in character. A noticeable tendency to regression is the rule although the defect may remain stationary. In the case of tumors the usual procedure is a slow progressive increase in focal signs and symptoms.

Lillie¹⁰ has recently mentioned a syndrome of importance in localizing tumors in the lateral part of the transverse fissure. The eye signs are depend-

ent upon the fact that the optic tract is situated in the roof of the lateral portion of the transverse fissure and this anatomic relationship persists up to the external geniculate body.¹¹ The optic tract occupies such a very small area in this location that a minute lesion will produce considerable effect with great rapidity. Lesions in this location show an initial precipitous homonymous hemianopsia followed sometime later by progressive hemiplegia or hemianesthesia and usually associated with a homolateral diminution of the pupillary reflex. The recognition of this syndrome is of clinical importance since the site of the lesion makes it practically inaccessible for surgical removal.

The visual field defects found in tumors of the basal ganglions (caudate, lentiform, and amygdaloid nuclei, and the claustrum) are a late manifestation and are due to the extension of the tumors so that they encroach upon the geniculate body or optic tract. These visual disturbances always occur as an homonymous hemianopsia and, as a rule, are preceded by motor and sensory disturbances.

Tumors of the occipital lobe are characterized by a contraction of the visual fields of the opposite side manifested by a gradual developing homonymous hemianopsia. In contrast to the hemianopsias due to chiasmal involvement the visual acuity is usually normal since the macula fibers are seldom involved until very late in the disease. Such tumors are often characterized by the presence of flashes of light, frequently colored, and suggesting fireworks, this in contrast to the visual hallucinations in tumors of the temporal lobe, where, as mentioned before, small black figures are often seen. Lesions in the cuneus, angular gyrus, and calcarine fissure may also produce an homonymous hemianopsia. Various types of segmental field defects are encountered in injuries localized in and around the calcarine fissure but a survey of these changes is beyond the scope of this paper. In the main, tumors involving the posterior part of the optic radiations and the occipital lobe present similar visual field changes. Their differentiation depends upon the associated neurological signs and symptoms.

There is no phase of an ophthalmologist's work quite so difficult and time-consuming as perimetry. Infinite patience is often necessary and the examination frequently has to be repeated before a diagnosis can be reached. Localization of cerebral lesions is of vital importance, for the progress of

neuro-surgery has made their accurate localization a greater responsibility than ever before. Perimetry has contributed largely toward the advances which have been made and it is of the utmost value when supplemented by X-ray and neurological examinations.

BIBLIOGRAPHY

- ¹ Peter, L. C.: *The Principles and Practices of Perimetry*, 1916.
- ² Ronne: *Non-Hypophyseal Affections of the Chiasm*; *Acta Ophth.* 192 v 6mo 4.
- ³ Henschen, S. E.: *Sehstorunghin bei Erkrankungen der Zentralganglia*, in *Handbuch der Neurologia*, Berlin 3:767-768, 1912.
- ⁴ Kronfeld, P. C.: *The Central Visual Pathway*, *Archiv. of Ophth.*, December, 1929.
- ⁵ Moore, F.: *Medical Ophthalmology*, ed. 2, 1925.
- ⁶ Cushing and Walker: *Archiv. of Ophth.*, 1916 xlv 407 and 1819 xlvii; *Brain*, 1914 xxxvii, 34.
- ⁷ Cushing, H.: *Arch. of Ophth.*, May, 1930, 3:505.
- ⁸ Cushing, H.: *The Field Defects Produced by Temporal Lobe Lesions*, *Brain*, 44:341-396, 1921.
- ⁹ Coleman, C. C.: *Brain Abscess*, *Trans. Sec. Ophth.*, A. M. A., 1929.
- ¹⁰ Lillie, W. I.: *Homonymous Hemianopsia*, *Trans. Sec. Ophth.*, A. M. A., 1930.
- ¹¹ Ranson, S. W.: *The Anatomy of the Nervous System*, 1923, 252-257.

THE DIAGNOSTIC VALUE OF BILE DRAINAGE*

By RUSSELL S. BRAY, M.D.

454 ANGELL STREET, PROVIDENCE, R. I.

It is the purpose of this paper to summarize the information of practical clinical importance that may be obtained from a study of the bile collected by means of duodenal drainage.

Since Lyon first published his experience with bile drainage in 1919, a great deal has been written of a controversial nature concerning the value of the method in determining biliary tract pathology.

A brief discussion of our present conception of duodenal drainage may clarify some points which have been the subject of criticism by various investigators.

Hollander¹ describes the origin of bile drainage as follows: In 1917, S. J. Meltzer published a the-

oretical discussion of his views regarding the interrelation between the gall bladder musculature and the sphincter of Oddi. He invoked the general physiological law of "contrary innervation" to explain their interplay as antagonists in the normal storage and discharge of gall bladder bile. He drew an analogy between the action of gall bladder and that of the urinary bladder, in that, when the bladder contracts the sphincter relaxes, and when the sphincter contracts the bladder relaxes. In experiments with magnesium sulphate he observed that the local application of a 25 per cent solution of that salt on the duodenal mucosae caused a complete local relaxation of the intestinal wall. He also suggested that such an application of the magnesium salts might relax the sphincter of the common duct and permit the ejection of bile. Another significant statement which Meltzer made is that the degree of local relaxation is not as great when the salt is administered by mouth; that is, when it has to pass through the stomach before reaching the intestines.

Dr. B. B. Vincent Lyon was inspired by the possibility of developing this physiological experiment into a practical clinical method of studying the bile as obtained through the duodenal tube. During the same month that Meltzer's paper appeared, Lyon began his first clinical experimental observations on human beings by means of the duodenal tube and various solutions of Epsom salts and other substances. From this period to the past year, Lyon has supervised seventeen thousand biliary tract drainages.

From his enormous clinical experience with bile drainage Lyon² "states that he has become convinced of the practical ease with which both the normal and the pathological biliary apparatus can be drained of their contents, with certain exceptions and within certain limitations to be referred to later on; and of the possibility to segregate and study bile obtained from the duodenum, from the bile ducts, from the gall bladder and from the liver. This does not mean that segregation of bile can be made so sharply that it can be said positively that any given sample is derived exclusively from the bile ducts or from the gall bladder or from the liver, but segregated to the extent that it is possible to infer that the larger amount of the various types of bile recovered during a biliary tap is being drained from the ducts, or from the gall bladder or from the liver. It is also possible by cytological,

*Read before the Providence Medical Association, Dec. 1, 1930.

cultural and chemical studies of these various portions of segregated bile to make certain inferential diagnostic deductions as to the condition of health or disease within the biliary tract."

The subject of bile drainage has been taken up by various workers and dissenting opinions have been expressed from time to time as to the possibility of segregating bile in the first place and the value of cultural and cytological examination of the bile aspirates when recovered through the duodenal tube.

Lyon, for the sake of furnishing a descriptive classification for the bile fractions, termed the first bile to appear after stimulation "A" bile, or duodenal duct bile. The dark fraction which he believed came only from the gall bladder he termed "B" bile, that from the liver, "C" bile. Thus, any combination of these may be present in a drainage.

Einhorn³ maintained that the concentrated "B" fraction of outstanding color intensity may be produced by the action of the magnesium salts on the liver, and is not due to the evacuation of the gall bladder. He states that the stronger the magnesium sulphate solution the darker the bile and the higher the specific gravity. However, Crohn and his co-workers have shown by experimental work that the sulphate salts do not affect the color of bile. The additional carefully performed experimental work of Patterson upon the absorption of salts by the liver confirms this view. Therefore, we no longer question the fact that various shades of colored bile can be recovered from the biliary tract, and that this variation in color must have some physiological or pathological significance.

A cholecystectomized patient will occasionally discharge a dark colored fraction. This clinical observation for a time threw doubt upon Lyon's contention that dark bile is recovered only from the gall bladder. Rost,⁴ however, published the results of his investigations upon the intra-hepatic duct dilatation which occurred in cholecystectomized dogs. He showed that organic dilatation of the bile ducts would occur, and in some instances a new gall bladder was formed from the cystic duct. In 1926, conclusive proof that this phenomenon could also occur in the human was furnished by Counsellor and McIndoe. They showed that the biliary tree dilatation could occur in patients with chronic partial or complete obstruction of the extra-hepatic duct system or in chronic calculous

cholecystitis. When "B" bile is recovered from a cholecystectomized patient it must be assumed that a likelihood of dilated ducts with sacculi or intra-hepatic stasis exists. In other words, the biliary duct system has become a miniature gall bladder and can concentrate bile to a sufficient degree to produce a dark fraction. Rous and McMaster⁵ have shown that the gall bladder is able to reduce the bulk of the bile delivered to it as much as ten and two-fifths times. This work has established for all times the fact that one of the functions of the gall bladder is to concentrate bile, the color of which in health is light amber to dark brown.

In 1927, Dr. Gregory Cole, representing a rather large group of clinicians who still doubted the ability of the duodenal tube to evacuate the liquid contents of the gall bladder by any means of intra-duodenal stimulation, challenged Lyon to prove beyond further doubt that his contentions were true. Cole proposed to use cholecystography as a means of showing graphically any reduction in the dye filled gall bladder as a result of duodenal drainage. No one can deny that this was a severe test. However, the results of this critical review, which was carried out at the Jefferson Hospital by Lyon, Cole, Swalm, and Manges, and at the post-graduate hospital of the University of Pennsylvania by Bockus and Cohen, were most gratifying and revealed a marked reduction in the size of the dye filled viscus. There has now been so much proof established as to the origin of "B" bile that it is hoped that further controversy in regard to drainage of the gall bladder by the duodenal tube may be unnecessary. There are those who still question the validity of applying the law of "crossed innervation" to the gall bladder and the sphincter of Oddi, as expressed by Meltzer. Further discussion of this academic subject would be here out of place. Suffice it to say that there is increasing clinical and experimental evidence to support the theory of Meltzer.

Clinically, the failure to recover "B" bile in a properly performed drainage must mean one of the following: (1) Cystic duct obstruction. (2) Possible atony of the gall bladder which seems to be identical with the "gall bladder inertia" described by the French school. These are probably overstretched gall bladders, some of them with paper thin walls. (3) Some disturbance in the neuro-muscular balance between the gall blad-

der and the sphincter of Oddi, termed "physiologic block" by Smithies and seen in patients usually exhibiting other evidence of an unstable nervous system. (4) Or the gall bladder may be so choked with stones and inspissated tar-like bile that bile evacuation is rendered impossible.

Realizing that these four factors are possible reasons for the non-appearance of "B" bile, it becomes necessary to devise some method of differentiating them. The duodenal bucket must be in the duodenum, and whenever in doubt the position of the tip must be verified by fluoroscopic control. Repeated drainages should be instituted, as it is surprising how much of value is often found in subsequent drainages. A series of drainages will frequently result in the discharge of bile from an atonic gall bladder which possesses a residual tonus still capable of gradually responding to repeated stimulation. It can be emphatically stated that a diagnosis of gall tract disease should never be made from the study of a single drainage. In those cases exhibiting the troublesome mechanism of pylora-spasm or ampulla-spasm, atropinae and sedatives should be administered.

The gross appearance of the bile aspirates should be carefully noted, as much of importance can be learned from this alone. However, I believe that in the past too much emphasis has been placed upon the significance of the color and consistency of bile, as the observer may be readily tempted to render an explanation for the varying play of color, which actually may be unsupported by fact. The egg yolk yellow and greenish yellow bile is produced by the regurgitating stomach secretions which frequently occur in "spurts" throughout the drainage. The appearance of "B" bile is unmistakable, and can be easily distinguished from the "DC" and "C" fractions. Grossly the normal "B" bile is clear, transparent, light amber to dark brown in color. It is free from shreds and gross detritus; it is viscid and averages from 35 to 50 centimeters.

Recently Hollander⁶ has devised a method of colorimetric study of "B" bile. He describes various values of color intensity which are assumed to have some diagnostic significance. With his technique he has been able to diagnose correctly evidence of a pathological gall bladder in 96 per cent of the cases studied. He has checked his interpretations by operative controls. More work must be

expected along this line before we accept it as a routine method of study.

Microscopic examination of the fresh bile aspirates yields information of the utmost clinical value. The bile may be centrifuged for ten minutes as suggested by Chester Jones⁸ or the "flakes" or suspended cellular material be "fished" out by means of a pipette. In normal persons all investigators are agreed that the bile contains only an occasional leucocyte, epithelial cell, crystal or bacteria, amorphous bile salts and frequently some elements the identity of which can not be determined.

It will be recalled that the mucosae of the duodenum is thrown into ridges forming the valvulae conniventes and smaller rugae. Over all this spreads the surface layer of columnar, ovoidal or cuboidal epithelium. Within the biliary and pancreatic ducts and the gall bladder, the mucosa surface is also covered by simple columnar cells with mucous goblet cells interspersed. The critics of bile drainage have again carried on a lengthy discussion as to the possibility of differentiating the source of the cells seen in the microscopic study of bile, as all of the duodenal-biliary tract area is lined with a mucous membrane of simple columnar epithelium. However, clinical experience has again rendered evidence to validate the following deductions of Lyon, Swalm, and Hollander.⁷

In general, the cells exfoliated from the duodenum are ovoid or cuboid in outline, larger than a white blood corpuscle, and are rarely bile-stained. Those coming from the bile ducts and gall bladder are typically columnar in outline and are bile-stained. Those from the gall bladder are the tallest of any of the columnar cells, are always deeply bile-stained, and are frequently arranged in fan-like fashion, rosettes or clusters. Hollander, having studied the duodenal aspirates of nine cases of mechanical obstruction of the common duct, has found the "A" bile to contain epithelial cells having a uniform appearance, being short and cuboidal rather than tall and columnar in shape, are coarsely granular and usually occur enmeshed in thick strands of mucus, forming a large flocculi. The bile stain is irregularly distributed. Bacteria are frequently present in distinct colony formation. Occasionally small groups of leucocytes are found. He also found tall columnar cells to be present in both the common duct and gall bladder.

Therefore, it must be borne in mind that the type of epithelium present in the bile will not necessarily determine the level of pathology; however, exfoliative duodenitis is practically always present in cholecystitis, and recent study has shown the entire duodenal-biliary tract to be involved in cholecystitis, therefore, the presence of desquamating epithelial cells in large numbers may be considered as indicative of some degree of pathology.

Some importance may be placed upon the detection of sand-like particles. These may be black, brown, or red in color and of a gritty consistency. Microscopically they consist of various crystals, bile pigment, bile salts, and other amorphous bile-stained material. They have been found occurring in both the bile ducts and gall bladder. Their presence in large amounts is another significant finding.

Cholesterin crystals scattered throughout the microscopic field as simple or double plates have occasionally been isolated from the bile ducts. Agminated cholesterale crystals, however, have been found only in the gall bladder. In Hollander's study, agminated cholesterale crystals were found in 86 per cent of the cases of cholelithiasis. They are not positive evidence of the presence of formed stones as they may also occur in cholesterosis.

In 1927, Lyon and Swalm⁹ described a substance which they believed to be significant of cystic duct catarrh with possible obstruction. They believe the characteristic picture of cystic duct obstruction resulting from a low grade catarrhal infection to be absence of "B" bile, the microscopic detection of dense mucus shreds often twisted or spiraled and encrusted with bile salts; and the presence of an oleaginous material ranging from pale to bright yellow which melts out into globules, pools and lakes. Chemically this lipoid appears to be a fatty ester of cholesterale. Lyon has controlled his investigations of cystic duct block with cholecystography. There is still some discussion as to the significance of oleaginous material. I have found it present in the bile from normal gall bladders, and in gall bladders proven by cholecystography to have a patent cystic duct. On the other hand, I have most frequently found it in the bile from diseased gall bladders—proven to be so at operation.

Time will permit only a summary of the important observations reported by these authors—as a result of their study they believe that:

(1) Catarrhal obstruction of the cystic duct is of common occurrence. It may be partial or complete. It occurs frequently in the early stages of cholecystitis, but may also be present in later and more severe grades of disease.

(2) It does not give a characteristic symptomatology.

(3) Its presence is indicated by a characteristic microscopic picture of biliary drainage aspirates.

(4) This form of cystic duct obstruction can be differentially diagnosed only by biliary drainage study.

(5) When the catarrhal obstruction is complete the Graham cholecystogram will be positive, thus suggesting cholecystitis of a surgical degree. But by means of repeated biliary drainages, it has been possible to change such a positive into a negative or normal cholecystogram.

(6) This condition may account for some cases in which operation was performed on the basis of a positive cholecystogram but in which the surgeon was unable to demonstrate disease of the gall bladder.

(7) It is, therefore, desirable that the patient in whom disease of the gall tract is suspected should be studied by both biliary drainage and the cholecystogram, if the welfare of the patient is given first consideration.

I consider the work of these authors an outstanding contribution to the study of clinical bile microscopy. As usual, there is still much discussion concerning the source and nature of oleaginous substance. At the gastro-enterological clinic of the medical department of the City Hospital, this substance is being studied from a chemical viewpoint. We hope to learn much more about it, as the subject of cystic duct catarrh surely deserves more consideration than it has had in the past.

The cultural study of bile is considered of importance by some investigators. It must be admitted that the technical difficulties, as well as the rather meagre knowledge at present available as to the bacteriology of the stomach, duodenum and biliary passages, often make the bacteriologic study of the bile distinctly unsatisfactory. However, if one cares to carefully carry out the elab-

orate, time-consuming technique described by Kolmer and Lyon,¹⁰ the bacteriologic findings may prove to be useful. The results frequently do not repay the observer for the time consumed. In the usual case, culture of the bile is probably the least important step in bile study.

The microscopic study of bile is not through unless the microscopist searches carefully for the presence of parasites. The only one of clinical importance is *Giardia enterica*.¹¹ Since 1922, a total of 91 cases has been reported in the literature in which the *Giardia* have been recovered from the duodenal aspirates. In 1923, 41 cases were reported from the gastro-enterological clinics of Philadelphia. There is no characteristic symptomatology attributed to the presence of *Giardia*. It is of clinical importance, however, and seems to be most often found associated with disease of the gall bladder, bile ducts and duodenum.

One of the most exacting and accurately controlled investigations in the field of diagnostic bile drainage within recent years has been the work of Piersol, Bockus and Shay¹² upon the significance of bile pigment and cholesterine crystals. These investigators stress the diagnostic importance of a pigmentary deposit which they found to be frequently associated with gall stones. This pigment appears as a lustrous, golden yellow, more or less granular precipitate. There is no other element in bile which can be mistaken for it, in its typical morphology and physical characteristics. It is termed bilirubin calcium pigment, and is almost invariably found in the dark fraction of bile. These authors report the results of their study of 57 cases subjected to cholecystectomy. Cellular elements were rather infrequently encountered in the microscopic examination of the bile of the stone cases. An explanation may be found in the number of cases reported by pathologists, in which a section of the gall bladder showed marked atrophy or denudation of the mucosae. Thirty of the fifty cases which they drained were found to have bile in appreciable quantity in the gall bladder at operation. In all but three of these cases a "B" fraction was obtained through the duodenal tube. A persistence of gall bladder function in these stone cases as gauged by duodenal drainage was corroborated at operation in 90 per cent of the cases. The remaining twenty cases failed to evacuate a dark frac-

tion upon drainage, and at operation the gall bladder was empty of bile.

Bockus summarizes the result of this study as follows—of the 42 cholelithiasis cases in their series that were drained pre-operatively, 73.8 per cent showed calcium bilirubinate or cholesterin or both in the bile obtained from the duodenum. All of the cases having both cholesterine crystals and pigment in the bile obtained by biliary drainage proved to be cases of gall stones. In the majority of cases these elements were only found in the "B" bile.

In only 35 per cent of proven gall stone cases were the stones visualized by cholecystography, whereas in the same series a pre-operative diagnosis of stones was made from duodenal tube findings in 47 per cent of cases.

A pre-operative estimate of gall bladder function from the duodenal tube examination proved correct in 88 per cent. On the other hand, a similar estimation by cholecystography was found correct in only 65 per cent of cases.

They feel justified in emphasizing the value and importance of properly carried out duodenal biliary drainage in the diagnosis of gall stone disease. They believe that it has not been supplanted by any other diagnostic procedure.

Another splendid study correlating the results of cholecystography and the biliary drainage has been made by Snow¹³ working in the department of radiology of Mt. Sinai Hospital. Snow based his conclusions upon the study of 150 cases in which both cholecystographic examinations and biliary drainage were conducted. One hundred and thirty-five of these cases were operated upon. His results were similar to those of Bockus and his associates with the exception that no stress had been placed upon the significance of calcium pigment. He summarizes his study as follows:

- (1) Over 90 per cent of the cases that had both duodenal drainage and the Graham test gave similar results insofar as they both pointed to a normal or abnormal condition.

- (2) Gall bladder cases that have stones either calcified or radio-transparent, yield pathological bile by drainage and usually an absence of the "B" fraction.

At present I have studied five cases of gall bladder disease in which both calcium pigment and cholesterine crystals were found in the bile.

Two of these cases have been operated upon and cholesterole calculi removed from the diseased gall bladder. Another case has already had an appendectomy performed and at which time a contracted, thickened gall bladder was palpated but not removed. The remaining two cases have as yet refused surgical intervention.¹⁴ Since the original publication of this paper two additional cases showing cholesterole crystals and calcium bilirubinate pigment in the bile aspirates, have been operated upon. Calculi were removed at operation. None of the cases of my series revealed the presence of calculi by cholecystography.

In concluding the subject of biliary drainage, I wish to re-emphasize the value of a properly performed drainage as an aid in the diagnosis of biliary tract disease. Bile drainage as a means of therapy in the management of cholecystic disease has not been discussed.

It is not intended that bile drainage should do away with other diagnostic procedures of proven value.

The information gained from biliary drainage has been of sufficient value to warrant its use as an adjunct in the study of gall tract pathology.

Clinical syndromes as a result of upper right quadrant pathology are still sufficiently perplexing to require the aid of all accepted methods of study now available such as history, physical examination, liver function studies, the Van den Bergh and icterus index test, cholecystography, and transduodenal biliary drainage.

November 24, 1930.

BIBLIOGRAPHY

- (1) Hollander, Edward: Experiences with Non-Surgical Biliary Drainage. *The American Journal of the Medical Sciences*, Vol. CLXV, No. 4, April, 1923.
- (2) Lyon, B. B. Vincent: Non-Surgical Biliary Drainage. Published by Lea and Febiger, Philadelphia, Pa.
- (3) Einhorn, M.: Studies on the Action of Various Salts on the Liver. *New York Med. Journal*, 1921, 113, 313.
- (4) Rost, Franz: Translation from Mitth a.d. Grenzgeb. *Med. u. Chir* 1913, 26, 710.
- (5) Rous, P. and McMaster, P. D.: The Concentrating Activity of the Gall Bladder. *Jour. Exper. Med.*, 1921, 34, 47.
- (6) Hollander, Edward: Studies in Biliary Tract Disease III. The Diagnostic Value of a Colorimeter for the Meltzer-Lyon Test. *The American Journal of the Medical Sciences*, Vol. CLXXVII, No. 3, March, 1929.

(7) Lyon, B. B. Vincent; Swalm, William; Hollander, Edward: Personal Communications and Transactions.

(8) Lyon, B. B. Vincent, and Swalm, William: Obstruction of the Cystic Duct of a Catarrhal Variety, read before the Am. Gastro-Enterological Association, Atlantic City, May 3, 1927.

(9) Kolmer, Lyon B. B. Vincent: Non-Surgical Biliary Drainage. Lea and Febiger, Pa.

(10) Lyon, B. B. Vincent, and Swalm, William: Giardiasis: Its Frequency, Recognition, Treatment and Certain Clinical Factors. *Am. Journ. of the Med. Sciences*, Sept., 1925, No. 3, Vol. CLXX, p. 348.

(11) Piersol, Shay, and Bockus, Harold: From the Gastro-Enterological Clinic, Post Graduate Hospital, University of Penn.

(12) Snow: *American Journal of Roentgenology Transactions*, Dept. Radiology, Mt. Sinai Hospital, New York, 1928.

ANNOUNCEMENT

AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter again offers an award of three hundred dollars (\$300.00) for the best essay based upon original research work on any phase of goiter presented at their annual meeting in Kansas City, Mo., April 7th, 8th and 9th, 1931. It is hoped this offer will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in the hands of the Corresponding Secretary, J. R. Yung, M.D., Terre Haute, not later than April 1, 1931, to permit the award committee sufficient time to examine all data. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

First award of the 1930 annual meeting held in Seattle was given Dr. William F. Rienhoff, Jr., of John Hopkins University, Baltimore. Doctors O. P. Kimball of Cleveland, O. E. P. and D. R. McCullagh, Cleveland, Clinic Foundation, Cleveland, O., and Robert P. Ball of the University of Louisville, received honorable mention.

J. R. YUNG,
Corresponding Secretary

THE RHODE ISLAND MEDICAL JOURNAL

Owned and Published by the Rhode Island Medical Society
Issued Monthly under the direction of the Publication Committee, 106 Francis Street

FREDERICK N. BROWN, M.D., *Editor*
309 Olney Street, Providence, R. I.

CREIGHTON W. SKELTON, M.D., *Business Manager*

ASA S. BRIGGS, M.D.
ALEX M. BURGESS, M.D.
W. LOUIS CHAPMAN, M.D.
PAUL APPLETON, M.D.
WILFRED PICKLES, M.D.
NORMAN M. MCLEOD, M.D.
ALBERT H. MILLER, M.D.
DENNETT L. RICHARDSON, M.D.
GUY W. WELLS, M.D.
ISAAC GERBER, M.D.

Associate
Editors

Committee on Publication

FREDERICK N. BROWN, M.D., *Chairman*
C. W. SKELTON, M.D.
NORMAN S. GARRISON, M.D.
JULIAN A. CHASE, M.D.
JAMES W. LEECH, M.D.

Advertising matter must be received by the 10th of the month preceding date of issue.

Advertising rates furnished upon application to the business manager, CREIGHTON W. SKELTON, M.D., 106 Francis St., Providence, R. I.
Reprints will be furnished at the following prices, providing a request for same is made at time proof is returned: 100, 4 pages without covers, \$6.00; each additional 100, \$1.00; 100, 8 pages, without covers, \$7.50; each additional 100, \$2.80; 100, with covers, \$12.00; each additional 100, \$4.80; 100, 16 pages, without covers, \$10.50; each additional 100, \$3.00; 100, with covers, \$16.00; each additional 100, \$5.50.

SUBSCRIPTION PRICE, \$2.00 PER ANNUM, SINGLE COPIES, 25 CENTS.

Entered at Providence, R. I. Post Office as Second-class Matter.

RHODE ISLAND MEDICAL SOCIETY

Meets the first Thursday in September, December, March and June

JULIAN A. CHASE	<i>President</i>	Pawtucket
HARRY LEE BARNES	<i>1st Vice-President</i>	Wallum Lake
N. DARRELL HARVEY	<i>2nd Vice-President</i>	Providence
JAMES W. LEECH	<i>Secretary</i>	Providence
J. E. MOWRY	<i>Treasurer</i>	Providence

DISTRICT SOCIETIES

KENT

Meets the third Thursday in each month

G. SENERCHIA	<i>President</i>	Washington
W. H. DYER	<i>Secretary</i>	Warwick

NEWPORT

Meets the second Thursday in each month

D. P. A. JACOBY	<i>President</i>	Newport
ALEXANDER C. SANFORD	<i>Secretary</i>	Newport

R. I. Ophthalmological and Otolological Society—2d Thursday—October, December, February, April and Annual at call of President. Raymond F. Hacking, President; H. A. Winkler, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. Henry M. Boss, Jr., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

PAWTUCKET
Meets the third Thursday in each month excepting July and August
EARL F. KELLY *President* Pawtucket
J. LINCOLN TURNER *Secretary* Pawtucket

PROVIDENCE
Meets the first Monday in each month excepting July, August and September
JOHN E. DONLEY *President* Providence
P. P. CHASE *Secretary* Providence

WASHINGTON
Meets the second Wednesday in January, April, July and October
CHARLES P. CRANDALL *President* Westerly
JOHN CHAMPLIN, JR. *Secretary* Westerly

WOONSOCKET
Meets the second Thursday in each month excepting July and August
W. A. BERNARD *President* Woonsocket
T. S. FLYNN *Secretary* Woonsocket

EDITORIALS

NOISE AND HEALTH

It would seem that at last something was about to be done about the noise nuisance. Until very recently the only evidence that noise was disturbing and that it might have an injurious effect upon the health was an occasional timid "letter" in the newspaper, which was immediately howled down by the medical profession. As the writer was the author of most of the complaints in the local press he

well remembers that a canvass of physicians was made and without exception they agreed that it was eccentric and old womanish to think that one's health was disturbed by noise and resulting broken sleep and the matter was dropped for a while. Since that time, however, indubitable and convincing experimental evidence has been offered by neurologists that noise is not only harmful but very detrimental and the New York Board of Health has discovered and described a new method of recording sound amplitudes and the decibel is now taken and accepted as a physical entity. To it therefore belongs the credit of firmly establishing

this new feature in our pathology and local talent must rest content with the thought that "we saw it first."

It is apparent that ordinary private wish and public opinion needs more than an appeal to the Golden Rule for civic decency. It needs a law that can be enforced and that has the weight of public opinion behind it. We therefore may soon rejoice and be exceeding glad that no longer will our neighbor's radio scream out the glad tidings that a cough may be soon discouraged by taking a well-known or unknown preparation, to be had at all druggists, or that one may smoke indefinitely without a throat tickle or that a certain shaving soap will bring success and comfort on the morrow. No longer may the mud-diggers in the harbor sound whistles that can be heard for eight miles whenever the engineer changes his mind or place of digging. No more shall we be aroused by foreign folk songs and clattering garbage covers as the daily collection of garbage goes joyfully on. Soon barking dogs will be under the ban, as they should have been decades ago and wild parties must put on the soft pedal after 12, midnight, else a gentlemanly officer will remind the celebrants of the new law. Perhaps this new law will make offenders less selfish and more considerate of the rights of others but we should like to see the sergeant at the desk when he receives notice that Mr. A. thrust 150 decibels on the midnight air to the discomfort of his neighbor and refused to turn off the current or otherwise hold his peace. But we believe that the entire medical profession will stand strongly behind this new thought and, after looking about its own house and casting out the "mutt" that is in his own eye will assist others to expel the beam that is in his neighbor's optic. Life is hard enough without unnecessary annoyances and all these improvements will be hailed with delight by many besides ourselves.

When this has become accomplished it is hoped that some clarion voice will proclaim the need of clean harbor water and a sanitary bathing beach close at hand and that a benevolent government will assist in the laudable work to be done for the public health and recreation and convenience. Nature has been very kind in placing the means and material within the city limits, there is needed only to arouse a benevolent public opinion.

A CHANCE TO IMPROVE

We have often heard it deplored that there is no "teaching center" in any Rhode Island medical community, because of the lack of a medical school, in spite of the magnitude of clinical opportunities and the incident wide variety of cases suitable for presentation.

Attention has been called in these columns before to the excellent material available in many ways to the members of the profession who are desirous of enlarging their diagnostic acumen and experience. Perhaps the most attractive approach to the most interesting cases is made possible in the Clinic-Pathological Conferences held on Tuesdays at noon every other week at the Rhode Island Hospital, and to which all members of the profession are most generously welcomed.

These are the sort of meetings which seek to present in their entirety from the onset of the patient's illness, through the clinical course of the disease with all laboratory and other data, to the final outcome and the post mortem findings, one or two interesting cases. The writer has had the privilege and pleasure of attending several of these meetings greatly to his own advantage and his interest in the work in special fields that others are pursuing.

But that which stimulates the most admiration is the care with which these cases are prepared and the splendid presentation of the material at hand. The story of the case is briefly but most completely outlined. The laboratory work is painstaking and accurate, and the pathological reports are brilliant. Even the histological findings are presented by very beautiful micro-photographs, which not only commend the thoroughness of the microscopical study of the tissues, but portray an admirable technique in the art of scientific photography.

No doctor in Rhode Island need deplore the lack of teaching facilities here, or thereby excuse his inability to keep abreast of modern medical thought, while we have such splendid meetings as these conferences; and the time and effort necessary in attending them is more than pleasantly and profitably spent, and best of all, in the last analysis, our patients receive the ultimate benefit.

ON PRE-MEDICAL STUDIES

A recent very able editorial in this Journal prompts many thoughts regarding pre-medical studies which have been not aimlessly in mind for many years. It is in looking backwards over close to half a century that one is able to analyze his success and errors and measure their causes and to estimate what part is due to preparation or lack of it.

No one will deny that there can be no end to suitable preparation for the medical life, and that throughout this life preparation for problems to come should still be pursued. Pre-medical days are precious and altogether too few, even if some of them seemed long in the passing. When, however, one enters busy life, so many and such varied problems confront one that the powers are taxed to their utmost and the wish that one had more of this and less of that often obtrudes. Now, life cannot or should not be all utilitarian nor should it all be cultural. We have all of us had our Latin, French and German. Some of us have kept them up, and perhaps they have been a lasting joy and satisfaction, but the writer is inclined to agree with an editorial which appeared in this Journal some time back that he would be glad to trade the lot for a working knowledge of type-writing and shorthand. Ralph Waldo Emerson, in one of his essays, urged against spending too much time on foreign languages, as the effort was too great; that there were other and more important things to be done, and that anything particularly worth while was furnished forth with a translation close at hand. This is particularly true of medical articles; all of them of importance are translated by trained reviewers, and besides, most of us do not get enough of these foreign languages to allow us to read, talk or translate them readily. The Latin required for prescription writing is easily obtained in a way less arduous than that of high school and university, and the use of elaborate prescriptions even now is almost a thing of the past. Even with the Latin now required we venture to say that very few medical graduates can read their own diploma. Greek we pass over as a luxury that very few can enjoy. The so called "cultural" idea is pretty well played out, for if a man is not made a gentleman in his own home, he surely is not in college, and nothing can be more absurd than the thought that the study of ancient history, much of which is not nice to think

about, makes a man better. But time is fleeting. There are hands to be trained in the use of tools, powers of observation to be trained, acuity of eye and ear to be fostered, reasoning powers far remote from the values of "X" or integrals to be developed, and a humanity that the so called humanities do not affect to be, realized and to be made a part of one's life. A knowledge of how to use fine tools will do more for the prospective surgeon than will differential equations, the ability to distinguish between sounds, and to know the subcrepitant rale when heard is of more importance than the year in which Rome was burned or that in which Spenser wrote the *Fairie Queene*. Fortunate is he who knows in early life what his life's work is to be that he may apply himself to those studies which will assist him in its preparation, and doubly fortunate he who has wise advisors and experienced counsel, and the mind to heed them.

A DESIRABLE TYPE OF ARTICLE

It has been said that all Rhode Island is divided into three parts, Providence, Newport, and South County; the first, the home of its industry and wealth, the second, its playground, and the third, peopled by Johnny-cake eating barbarians. Be this true or not, a contribution to this Journal in the January number seems worthy of comment for various reasons. Reference is directed to an article with the caption "Westerly's Diphtheria Record." It is both interesting and conclusive. It is a story of a very reasonable and successful coordination of the work of a local public agency and a state department. The author is no longer young (but if facing the writer he would probably remark, rather pointedly, "Thee is no longer a child, thyself") and his work, while highly useful, has not been dependent upon skill in one special branch of medicine, nor upon expensive apparatus.

One's admiration for the trained specialist is easily aroused. To see him work, it is evident that he has served a long and thorough apprenticeship. He goes about his job with assurance and zeal, which often makes him quite unconscious of his surroundings. He needs no greater praise. But it is not given to all, to do a cistern puncture, not every physician can explain the meaning of an electrocardiographic record, nor have the skill

required for the performance of a laminectomy. It would appear from the dearth of less technical articles, that the great rank and file of medical men have come to feel that for them most published, and spoken, lectures on medical subjects, are to be first of all upon a very limited topic and handled by a highly trained specialist. How often do they sit through—people very seldom read through what does not interest them—the reading of a highly technical paper, in much the same frame of mind in which they find themselves, when, at their wife's urging, they array themselves in evening dress and listen to a program of classical music.

It is to be expected that more articles will be from those centers where clinical material is most abundant and where men have facilities for research not to be found elsewhere. Not the least reason for the excellence of work done in larger medical centres is the keen competition which comes from constantly rubbing shoulders with one's fellows. It is a pleasure, however, to see an article which comes from a physician not especially trained, an article which is readable and reports good statistics, and gives evidence of reduced morbidity and probably the saving of life. Congratulations, South County. Let us hope that the future will see more of such original articles.

OBITUARY

DR. WALTER O'KEEFE

Dr. Walter O'Keefe was born in Worcester, December 17, 1886. He obtained his education at the New York University and was graduated in medicine from the Bellevue Hospital Medical School. He served his internship at Bellevue. He came to Providence in 1912, after his Bellevue Hospital medical service and engaged in practice here. Soon after the War was declared with Germany, he, in June, 1917, entered the army as Captain in the Medical Corps. One of his contemporary officers writes about him as follows:

...."Early in September, 1917, a group of forty-four casual officers sailed on the S. S. Orania. O'Keefe was in this group and that is where I first knew him. Subsequently four of this group were selected to be attached to the Royal Army Medical Corps in the service of orthopedic surgery. Of this group O'Keefe and myself were members and for

a year after that time we served together in England mainly at the Third Southern General Hospital in Oxford. At the end of that time he contracted a rather purulent furunculus which incapacitated him for further active service, and which I have but little doubt was in a great measure responsible for the illness which resulted in his death. He spent several months more in a British Hospital as a patient and was eventually transferred to Walter Reed Hospital in Washington where he remained for some months, in very poor physical condition.

"During the time we were together in Oxford, I conceived the highest regard for his character and personality. The staff and patients had the same feeling about him, and it was with great regret that we faced the necessity of his discontinuing active work.

"Since his return to civil life . . . I have had the opportunity of visiting him on several occasions and of seeing him at various places at meetings and so on. No man I knew changed less in his cheerful outlook on life than O'Keefe did in these years since the war."

For his War work in England he was warmly commended by the British who especially asked that he be persuaded to remain at the hospital near Oxford rather than be transferred to the active front as was his wish.

The infection referred to above which occurred while he was in Service happened because of the tearing of his glove during the amputation of an infected extremity. At one time it seemed as though he would lose his hand from this infection and following that he had a general furunculosis because of which he was disabled for a year or more. He was in the Army almost two years. Subsequent to his discharge from the Walter Reed Hospital and from the Army, he went to the Mayo Clinic for four months and then on a trip around the world. He then returned to Providence where he again went into Practice. He was for a time on the Out-Patient staff of the Rhode Island Hospital but resigned from that in order to become a full time Medical Examiner for the Veterans' Bureau. That was his chief work at the time of his death.

Dr. O'Keefe had an unusually attractive personality. He was thoughtful, generous, faithful and conscientious in his work, always even-tempered and charitable in his attitude toward his fellows. His death was particularly tragic in that

it occurred in the very prime of life and that it developed as a result of what seemed to be a very insignificant scratch on the lip. This, however, became infected and culminated finally in a general septicemia which, after an illness of more than two months, caused his death. He was buried with military honors at Arlington Cemetery.

FRANK T. FULTON
N. DARRELL HARVEY

SOCIETIES

PROVIDENCE MEDICAL ASSOCIATION

The annual meeting of the Providence Medical Association was called to order by the President, Dr. Clinton S. Westcott, January 5, 1931, at 8:45 P. M. The records of the last meeting were read and approved. The annual reports of the Secretary, Treasurer, Standing Committee and Reading Room Committee were read and accepted. A letter from Dr. Ellen A. Stone thanking the Association for its greeting was read. The report of the Milk Committee was read and accepted. The President announced the appointment of Craig S. Houston as Chairman of the Obituary Committee on William T. Knoop.

The first paper of the evening was read by Dr. G. M. Dorrance of Philadelphia on the "Treatment of Cleft Palate." This is found in many of the lower animals. It is a congenital deformity and often associated with other anomalies. He has found this condition running back six generations. The mortality amongst these cases is large. The mortality in operations for hare lip is seven per cent, so always wait till they are in good condition. Cleft palates are preferably operated from three years on and never till they are in good condition. Proper operation and follow-up care will give normal speech in six to twelve per cent. Small clefts in the back give the worst speech. A large number of lantern slides were shown illustrating the anatomy and details of operations.

The chief point of his work is that the superior constrictor is a true sphincter, cleft palates are shortened posteriorly and at operation are thoroughly freed, pushed back and thus the sphincter is allowed to close, thus shutting off the naso-

pharynx. The paper was discussed by Drs. Barrows, Stilson, Hawkins, Westcott, Dorrance and Charles Smith.

The Secretary read an obituary on Dr. Walter O'Keefe presented by Drs. Fulton and N. Darrell Harvey.

The annual address of the President was read by Dr. Westcott. This was of an optimistic tenor, the reader not fearing the prophecies of the socialistic or state medicine. He felt that the family practitioner still existed not as one who knew all medicine but knew his patients and when they needed the help of specialists.

The Secretary was instructed to cast one ballot for Dr. John E. Donley as President. Dr. Joseph Hawkins was instructed to escort him to the chair. The newly elected President made a few remarks. In accordance with Article 1, Section 6, of the By-Laws, the officers and committees were elected as follows:

For President—John E. Donley, M.D.

For Vice-President—Lucius C. Kingman, M.D.

For Secretary—Peter Pineo Chase, M.D.

For Treasurer—Charles F. Deacon, M.D.

For Member of the Standing Committee for five years—Clinton S. Westcott, M.D.

For Trustee of the Medical Library for one year—Albert H. Miller, M.D.

For Reading Room Committee—George S. Mathews, M.D., Elihu Wing, M.D., Guy W. Wells, M.D.

For Delegate to the House of Delegates of the Rhode Island Medical Society—W. Pickles, M.D., A. A. Barrows, M.D., G. H. Crooker, M.D., W. S. Streker, M.D., E. M. Porter, M.D., C. F. Gormley, M.D., H. McCusker, M.D., P. P. Chase, M.D., J. T. Monahan, M.D., H. Libby, M.D., A. W. Mahoney, M.D., J. A. Gilbert, M.D., F. W. Dimmitt, M.D., C. W. Skelton, M.D., T. W. Grzebien, M.D., R. DiLeone, M.D., L. I. Kramer, M.D., W. A. Horan, M.D., P. C. Cook, M.D., J. J. Hoey, M.D.

For Councillor for two years—Edward S. Brackett, M.D.

The President appointed as Collation Committee, Frank B. Littlefield and Raymond F. Hacking. Publicity Committee, Creighton W. Skelton, Isaac Gerber and Charles F. Gormley.

It was voted to appropriate \$250.00 for the purchase of journals, \$200.00 for binding journals

and \$450.00 as a donation to the R. I. Medical Society. The annual dues for the ensuing year were fixed at five dollars.

The meeting adjourned at 10:30 P. M. Attendance 85. Collation was served.

Respectfully submitted,

PETER PINEO CHASE
Secretary

HOSPITALS

MEMORIAL HOSPITAL

Staff meeting held January 8, 1931. Meeting was called to order at 9:15 P. M. by President Holt.

Minutes of previous meeting were read and approved.

Dr. James L. Wheaton read a very interesting letter from Dr. F. V. Hussey which expressed his appreciation of the Christmas card sent him by the members of the staff.

As this meeting was considered the annual meeting, report of the treasurer was submitted, read and approved as read, and ordered placed on file showing a balance on hand in the treasury of \$83.43.

The secretary made a brief report, a copy of which will be filed with these minutes.

Motion made by Dr. Wheaton and seconded to reinstate the present officeholders for another year was carried and the secretary instructed to cast a ballot.

President	Dr. Charles H. Holt
Vice-president	Dr. Elihu S. Wing
Treasurer	Dr. Robert T. Henry
Secretary	Dr. Stanley Sprague

Motion made by Dr. Henry B. Moor was seconded and carried that the dues of the Staff be \$2.00 per member as in the previous year.

The paper of the evening by Dr. W. A. Stoops, "Medical Activities in the Virgin Islands" was then presented.

A very interesting account of the improvement in health and sanitation measures under American rule was outlined by the speaker. In considering the special diseases in that district, Dr. Stoops spoke of elephantiasis, the very large herniae which

he claimed was a racial characteristic, leprosy and its treatment, and pellagra. He spoke of the great amount of work done by American Hospitals in St. Croix, and the great amount of dispensary services which was rendered the natives. In addition, he gave a very vivid description of the life and final death of the famous pirate, Blackbeard, who made the Virgin Islands his headquarters in the seventeenth century.

The meeting adjourned at 10:12 P. M.

STANLEY SPRAGUE,
Secretary

MISCELLANEOUS

PERFUMES AND PIGMENTATION

The use of cosmetics and perfumes has grown to enormous proportions in recent years. The fad is no longer confined exclusively to women. The male of the human species has begun to exhibit occasional indulgence in cutaneous applications that were once frowned on as unmasculine. The physician is only secondarily concerned with the social proprieties, the personal peculiarities or the possible implications of these growing customs. Lotions and perfumery play a part in present-day life among a sufficient number of persons to raise the question of the physiologic wisdom of the practice. Dermatologists may not agree as to the desirability of the repeated applications of alcoholic solutions, such as most lotions are, to the skin; they may differ with respect to the use of various types of greases more elegantly designated as cosmetics or skin creams. All admit, however, that idiosyncrasies occur which express themselves in various types of dermatitis. A remarkable pigmentation of the skin, originally described by Freund¹ in 1916 and later named berlock dermatitis by Rosenthal,² has been subjected to renewed observation in this country by Gross and Robinson³ at Columbia University College of Physicians and Surgeons. The condition results from the application of toilet waters to the skin immediately before it is exposed to the sunlight. Eau de cologne and also oil of bergamot, which is one of the essential oils used in toilet waters, have been found to have photosensitizing properties.

The dermatitis that can be induced by artificial ultraviolet irradiation as well as by sunlight after applications of perfumes to the skin is usually found on the neck and chest, and appears as dark red areas changing to brown slightly mottled with red. The shape of such an area is usually similar to that of an area covered by a small drop of flowing fluid, and it generally appears during the summer. The New York dermatologists raise the question whether one is dealing with a personal susceptibility or with several factors, such as climate, perspiration, brand of perfume and short intervals between application of inciting cause and exposures to sunlight. In view of the fact that perfumes and toilet waters are so widely used and that sunbaths have become so popular, they are inclined to think that there must be some predisposing factor. The number of cases seen and the number of people under the conditions seeming to cause this dermatitis are not in proportion. In any event, the lovers of sunshine and the patrons of alpine rays may do well to bear in mind that in some persons the daub of the perfume bottle stopper may bring about leopard spots where they were not expected.—*Jour. A. M. A.*, July 5, 1930.

¹Freund: *Dermat. Wehnschr.* 63:931, 1916.

²Rosenthal, F.: *Zentralbl. f. Haut- u. Geschlechtskr.* 13:322, 1924.

³Gross, P., and Robinson, L. B.: *Berlock Dermatitis*, *Arch. Dermat. & Syph.* 21:637 (April) 1930.

TUBERCULOUS PLEURISY

Gerald B. Webb, Colorado Springs, Colo. (*Journal A. M. A.*, July 5, 1930), stresses the fact that at adolescence a pleurisy will often have revealed the impregnation of tubercle, and it will only be a few years later that the pulmonary localization will manifest itself. In some cases pulmonary disease will light up ten to twenty years later and subjects of pleurisy in youth may not become phthisic until mature or old age. Tuberculous pleurisy may be acute or chronic. The acute form may be dry or accompanied by a serofibrinous and, at times, hemorrhagic fluid. Pleurisy with effusion can persist, occasionally, in spite of treatment, for a year or more. The condition is not infrequently bilateral. It is a frequent concomitant of artificial

pneumothorax when the onset may be accompanied by a high and lasting fever in some patients. Tuberculous pleurisy in general arises from a subpleural tubercle deposit, and the inflammatory condition is a result of allergy. Following a pleurisy with effusion the original lung focus may, by roentgen study, seem to have disappeared. Acute tuberculous pleurisy may arise insidiously in children and adults, without pain and at times without apparent fever. In the majority of patients, however, there is marked fever and definite pain. A simple test, and at times useful, which Webb suggested for diaphragmatic pleurisy is to order the patient to lie on the affected side. In such a position the recumbent diaphragm at first makes an increased excursion and this intensifies the pain of diaphragmatic pleurisy. In general, the symptoms of tuberculous pleurisy may simulate those of pulmonary tuberculosis; namely, a dry unproductive cough, malaise, fever, accelerated pulse and digestive disturbance. The latter is at times most marked when pleurisy with effusion occurs on the left side. Judging by the large number of pleuritic adhesions found at autopsies, pleurisy must be overlooked often when it is present. All chest pain and pain referred to the shoulders, arms and abdomen should lead a physician to suspect pleurisy. Sometimes such pains may originate from diseased tonsils and teeth. Cystic breasts in women, certain heart conditions, herpes zoster, gastric and spinal disease, and other possible causes may produce chest pains. Percussion is of great service in detecting change of resonance, and percussion with the tips of all four fingers should be used over the lung bases. Auscultation enables the physician to detect quiet breathing and the pleuritic rub. Rest, by means of strapping and posture, and heat, by means of an electric pad, are the best symptomatic methods of treatment. A patient who develops a tuberculous pleurisy should be given a long period of general rest, just as a patient with pulmonary tuberculosis, and the regimen should be continued for many months after all constitutional signs have ceased. Should extensive parenchymatous lung lesions be recognized, especially with cavitation, pneumothorax treatment should be instituted, provided the opposite lung is sufficiently free from disease. The tuberculous effusion may at times become purulent. If uncomplicated by secondary organisms repeated aspiration usually results in cure.